

IN THE CLAIMS

23. (Currently amended) A radiation source for use in endovascular radiation treatment, the radiation source comprising: ~~which comprises~~

at least one ~~or more seeds (treating elements)~~ comprising treating element, wherein each treating element is (space) apart from the next one, wherein each treating element has a radiation emitting element and means for containment of said radiation emitting element, wherein said [seeds are] at least one treating element is in an elongated container having at least one deflection site,

wherein the at least one deflection site is located in the space between two treating elements.

24. (Previously amended) The radiation source of claim 23, wherein the elongated container is a hollow cylinder.

25. (Previously amended) The radiation source of claim 23, wherein the container is made from a highly flexible material.

26. (Previously amended) The radiation source of claim 25, wherein said flexible material is selected from the group consisting of Ni-Ti-alloy and aluminium alloy

27. (Previously amended) The radiation source of claim 26, wherein said flexible material is selected from the group consisting of Nitinol and Tinal alloy BB.

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28. (Currently amended) A radiation source for use in endovascular radiation treatment, the radiation source comprising:

at least one treating element having a radiation emitting element and means for containment of said radiation emitting element,

wherein said at least one treating element is in an elongated container having at least one deflection site,

The radiation source of claim 23, wherein the one or more deflection site(s) at least one deflection site comprises perforation patterns.

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29. (Previously amended) The radiation source as in claim 28, wherein said patterns are laser perforations of the container.

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30. (Currently amended) A radiation source for use in endovascular radiation treatment, the radiation source comprising:

at least one treating element having a radiation emitting element and means for containment of said radiation emitting element,

wherein said at least one treating element is in an elongated container having at least one deflection site,

~~The radiation source of claim 23, wherein the at least one deflection site ~~one or more deflection site(s)~~ comprises multiple helical openings in the tube.~~

B3 31. (Currently amended) The radiation source of claim 23, wherein the ~~seeds~~ at least one treating element comprises rounded or spherical end caps on one or both ends.

32. (Currently amended) The radiation source of claim 23, wherein the ~~seeds are~~ at least one treating element is separated from each other by at least one spacer.

33. (Previously amended) The radiation source of claim 32, wherein said spacer is in form of a sphere.

34. (Currently amended) A radiation source for use in endovascular radiation treatment, the radiation source comprising:

B4 at least one treating element having a radiation emitting element and means for containment of said radiation emitting element,

wherein said at least one treating element is in an elongated container having at least one deflection site,

~~The radiation source of claim 23, wherein the at least one treating element is ~~seeds are~~ spaced from each other and fixed to the inner wall of the container.~~

35. (Previously amended) The radiation source of claim 23, wherein said means for containment is a metallic capsule.

36. (Previously amended) The radiation source of claim 23, wherein the radiation emitting element comprises any  $\alpha$ -,  $\beta$ - and/or  $\gamma$ -emitting substance.

37. (Previously amended) The radiation source of claim 36, wherein the radiation emitting element comprises one or more radioactive materials selected from the group consisting of  $\text{Cs}^{137}$ ,  $\text{Co}^{57}$ ,  $\text{Sr}^{89}$ ,  $\text{Y}^{90}$ ,  $\text{Au}^{198}$ ,  $\text{Pd}^{103}$ ,  $\text{Se}^{75}$ ,  $\text{Sr}^{90}$ ,  $\text{Ru}^{106}$ ,  $\text{P}^{32}$ ,  $\text{Ir}^{192}$ ,  $\text{Re}^{188}$ ,  $\text{W}^{188}$  and  $\text{I}^{125}$ .

38. (Currently amended) An apparatus for endovascular radiation treatment, the apparatus comprising:

B5 an elongated catheter having a proximal end portion,  
a distal end portion and a ~~single~~ first lumen for receiving  
a radiation source,

optionally a guide wire, and  
optionally a second lumen ~~therefore~~, and

a radiation source which comprises ~~one or more seeds~~  
~~(treating elements)~~ at least one treating element, wherein each  
treating element is (space) apart from the next one, wherein each  
treating element has comprising a radiation emitting element and  
means for containment of said radiation emitting element,  
wherein said at least one treating element is ~~seeds are~~ in an  
elongated container having at least one deflection site, .

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135 wherein the at least one deflection site is located in the space between two treating elements. 14

39. (Previously amended) The apparatus of claim 38, wherein the radiation source comprises a radiation emitting element comprising one or more radioactive materials selected from the group consisting of Cs<sup>137</sup>, Co<sup>57</sup>, Sr<sup>89</sup>, Y<sup>90</sup>, Au<sup>198</sup>, Pd<sup>103</sup>, Se<sup>75</sup>, Sr<sup>90</sup>, Ru<sup>106</sup>, P<sup>32</sup>, Ir<sup>192</sup>, Re<sup>188</sup>, W<sup>188</sup> and I<sup>125</sup> contained in a container made from a highly flexible material.

40. (Previously amended) The apparatus of claim 38, further comprising a containment vessel for radiation protection.

41. (Currently amended) An apparatus for endovascular radiation treatment, the apparatus comprising:

an elongated catheter having a proximal end portion,  
a distal end portion and a first lumen for receiving a radiation source,

136 optionally a guide wire, 6

optionally a second lumen, 7

137 a radiation source which comprises at least one treating element 8/9 comprising a radiation emitting element and means for containment of said radiation emitting element, wherein said at least one treating element is in an elongated container having at least one deflection site, and

~~The apparatus of claim 38, further comprising a magnetic means for guiding the radiation source.~~

42. (Previously amended) The apparatus of claim 38, further comprising an x-ray fluoroscopy device.

43. (Currently amended) A method for endovascular radiation treatment comprising the steps of

(a) directing an elongated catheter, having a proximal end portion, a distal end portion and a lumen extending therebetween for receiving a radiation source, to the selected site to be treated preferably by way of a guide wire in a separate lumen;

*no confusion means*  
*14* (b) introducing a radiation source into the catheter at its proximal end portion, which radiation source comprises at least one treating element, wherein each treating element is spaced apart from the next one, ~~one or more seeds (treating elements)~~, wherein said at least one treating element is ~~seeds~~ are in an elongated container having at least one deflection site, wherein the at least one deflection site is located in the space between two treating elements;

(c) moving said radiation source to said distal end portion preferably by way of a transfer wire;

(d) maintaining said radiation source at said distal end portion for a determined period of time; and

(e) retracting said radiation source to the proximal end portion preferably by use of a transfer wire.

44. (Previously amended) The method of claim 43, wherein moving and/or retracting in steps (c) and/or (e) is achieved by pushing or pulling the radiation source.

45. (Previously amended) The method of claim 43, wherein said movement in step (c) is achieved by pushing and said movement in step (e) is achieved by pulling said radiation source.

46. (Previously amended) The method of claim 43, wherein the radiation source is linked to a transfer wire at its proximal end and moving in step (c) occurs by pushing the transfer wire into the catheter and retracting in step (e) occurs by pulling the transfer wire out of the catheter.

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47. (Currently amended) A method for endovascular radiation treatment comprising the steps of

(a) directing an elongated catheter, having a proximal end portion, a distal end portion and a lumen extending therebetween for receiving a radiation source, to the selected site to be treated preferably by way of a guide wire in a separate lumen;

(b) introducing a radiation source into the catheter at its proximal end portion, which radiation source comprises at least one treating element,

wherein said at least one treating element is in an elongated container having at least one deflection site;

(c) moving said radiation source to said distal end portion preferably by way of a transfer wire;

(d) maintaining said radiation source at said distal end portion for a determined period of time; and

(e) retracting said radiation source to the proximal end portion preferably by use of a transfer wire,

138 ~~The method of claim 43, wherein~~ a radiation source comprising a magnetic elongated container is used and movement in steps (c) and/or (e) is achieved by magnetically pushing and/or pulling the radiation source using a transfer wire comprising a magnet or using an external magnetic means for guiding the radiation source.

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48. (Previously amended) The method of claim 43, wherein the radiation source comprises a radiation emitting element comprising one or more radioactive materials selected from the group consisting of Cs<sup>137</sup>, Co<sup>57</sup>, Sr<sup>89</sup>, Y<sup>90</sup>, Au<sup>198</sup>, Pd<sup>103</sup>, Se<sup>75</sup>, Sr<sup>90</sup>, Ru<sup>106</sup>, P<sup>32</sup>, Ir<sup>192</sup>, Re<sup>188</sup>, W<sup>188</sup> and I<sup>125</sup> contained in a container made from a highly flexible material.